

Application No. 10/605,977
Responsive to the Final Office Action of August 24, 2005

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REMARKS

Applicant thanks the Examiner for the thoughtful review of the application.

Amendments to the claims are described below in the **PRESENT AMENDMENT**.

The status of the claims is as follows:

- i. **Claims 13 – 20, and 22 - 37 are Pending** in the present application;
- ii. **Claims 12 and 21 are Cancelled**;
- iii. **Claims 13, 20, 22, and 24 – 27 and 29 – 32** were amended herein; and
- iv. **Claims 1 - 11 and 38 - 40 are Withdrawn** subject to Rejoinder per MPEP 821.04.

a. The Applicant respectfully request that the **Attorney Docket No.** for the present application be changed to **P029.03.CIP14+D23** as set forth on **Page 1** of a **Supplemental Application Data Sheet** submitted with this reply to the Office Action mailed on **24 August 2005**.

b. The Applicant respectfully requests that the Withdrawn **Claims 1 – 11 and 38 – 40** be rejoined.

i. **PRESENT AMENDMENT**

Claim 13 was amended to particularly point out and distinctly claim the subject matter the Applicant regards as the invention. Specifically, **Claim 13** was amended into independent form and now includes the limitations set forth in **Cancelled Claim 12**. Support for the amendment can at least be found in the **Specification** as originally filed. For example, original **Claim 12**.

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Dependent **Claim 20** was amended to replace the letter "A" with the word "The" to make clear that **Claim 20** is a dependent claim. **Claim 20** was also amended to depend from now independent **Claim 13**.

Claim 22 was amended to particularly point out and distinctly claim the subject matter the Applicant regards as the invention. Specifically, **Claim 22** was amended into independent form and now includes the limitations set forth in **Cancelled Claim 21**. Support for the amendment can at least be found in the **Specification** as originally filed. For example, **Paragraph 0041** of the **Detailed Description** and now **Cancelled Claim 21**.

Dependent **Claims 24 – 27** and **29 – 32** were amended to change their dependency to **Claim 22** due to the cancellation of **Claim 21**.

Claims 34 was amended to depend from **Claim 33** instead of **Claim 32**. Support for the amendment can at least be found in **Claim 33** as originally filed.

No new matter was introduced in amending the claims.

ii. ARGUMENT

a. Rejection of Claim 34 under 35 U.S.C. §112 second paragraph

Applicant has amended **Claim 34** to depend from **Claim 33** instead of **Claim 32**. Therefore, as amended herein, there is a proper antecedent basis in **Claim 34** for the term "plurality of via holes" and the rejection of **Claim 34** under **35 U.S.C. §112 second paragraph** ought to now be withdrawn.

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b. Rejection of Claims 12 and 20 under 35 U.S.C. §102(e) (745 - Hsu Reference)

A prima facie case of anticipation under 35 U.S.C. §102(e) requires every element of a rejected claim to be either explicitly or inherently disclosed in a single prior art reference. As stated by the Examiner on Page 8 of the instant Office Action, Claim 13 is allowable if rewritten in independent form to include the limitations of base Claim 12. The Applicant has amended Claim 13 into independent form so that Claim 13 now includes the limitations set forth in Cancelled Claim 12. Therefore, US Patent 6,569,745 to Hsu (*Hsu* hereinafter) does not explicitly or inherently disclose all of the elements now recited in independent Claim 13. Moreover, the rejection of Claim 12 is mooted by its cancellation herein. Rejected Claim 20 now depends from independent Claim 13 and inherits all of its limitations. Therefore, *Hsu* does not explicitly or inherently disclose all of the elements now recited in Claim 20. Consequently, Claim 13 is patently distinct in view of *Hsu* and Claim 20 is not anticipated by *Hsu*. Accordingly, Claim 13 is allowable and the rejection of Claim 20 under 35 U.S.C. §102(e) ought to now be withdrawn.

Claims 14 – 19 depend from independent Claim 13 and inherit all of its limitations. For at least the same reasons as argued above, Claims 14 – 19 are patentably distinct, are not anticipated by *Hsu*, and the rejection of Claims 14 – 19 under 35 U.S.C. §102(e) ought to now be withdrawn.

c. Rejection of Claims 21 and 25 under 35 U.S.C. §103(a) (798 and Wolf Vol. 1 References)

For a prima facie case of obviousness under 35 U.S.C. §103(a) to stand, all claim limitations must be taught or suggested by the combination of the references and there must be a suggestion or motivation to modify or combine the references to arrive at the claimed invention.

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The rejection of **Claim 21** is mooted by its cancellation herein. The elements of **Claim 21** have been included in amended independent **Claim 22**. Rejected **Claim 25** depends from **Claim 22** and inherits all of its limitations. For at least the same reasons as argued in section (b) above, *Hsu* and *Wolf et al. Vol. 1 (Wolf-1 hereinafter)* taken individually or in combination do not teach or suggest all of the limitations in independent **Claim 22** as amended herein. Specifically, the limitations of "modifying an interface property between the multi-resistive state element layer and the top electrode layer" is not taught or suggested in the cited sections of *Hsu* and *Wolf-1*. Therefore, independent **Claim 22** and **Claim 25**, are patentably distinct and non-obvious in view of the cited sections of *Hsu* and *Wolf-1*. Accordingly, independent **Claim 22** is allowable and the rejection of **Claim 25** under 35 U.S.C. §103(a) ought to now be withdrawn. In that **Claim 23** and **Claims 26 – 37** now depend from independent **Claim 22** and inherit all of its limitations, those claims are also patentably distinct and non-obvious in view of the cited sections of *Hsu* and *Wolf-1*. Therefore, **Claim 23** and **Claims 26 – 37** are allowable and any rejections of those claims under 35 U.S.C. §103(a) ought to now be withdrawn.

d. Rejection of Claim 24 under 35 U.S.C. §103(a) (798, Wolf-1, and Newman References)

For at least the same reasons as argued in sections (b) and (c) above, **Claim 24** inherits all of the limitations of independent **Claim 22** and is patentably distinct and non-obvious in view of the cited sections of *Hsu*, *Wolf-1*, and **US Patent 5,280,013** to *Newman (Newman hereinafter)* considered individually or in combination. Therefore, the rejection of **Claim 24** under 35 U.S.C. §103(a) ought to now be withdrawn.

e. Rejection of Claims 30 and 32 under 35 U.S.C. §103(a) (798 and Wolf Vol. 2)

For at least the same reasons as argued in sections (b), (c), and (d) above, **Claims 30** and **32** inherit all of the limitations of independent **Claim 22** from which they

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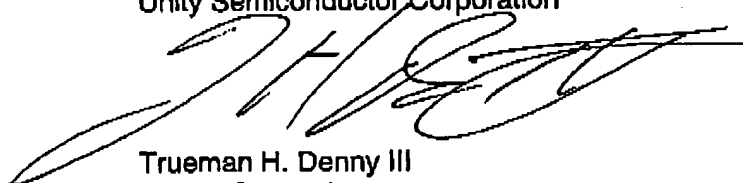
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depend, are patentably distinct, and are non-obvious in view of the cited sections of *Hsu* and *Wolf et al. Vol. 2 (Wolf-2 hereinafter)* considered individually or in combination. Therefore, the rejection of **Claims 30 and 32** under **35 U.S.C. §103(a)** ought to now be withdrawn.

iii. **CONCLUSION**

Applicant now believes the present case to be in condition for allowance, and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application the undersigned can be reached at (408) 737-7200 x124.

Respectfully submitted,
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